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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,356	01/11/2002	Jerome Lapointe	17101-003006 / 801F	7695

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EXAMINER	
STARKS, WILBERT L	
ART UNIT	**PAPER NUMBER**
2129	

MAIL DATE	DELIVERY MODE
09/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/043,356	LAPOINTE ET AL.	
	Examiner	Art Unit	
	Wilbert L. Starks, Jr.	2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 U.S.C. §102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 are rejected under 35 U.S.C. §102(b) as being anticipated by Hutcheson, et al (U.S. Patent Number 5,465,308 A; dated 07 NOV 1995; class 382; subclass 159). Specifically:

Claim 1

Claim 1's "A computer system, comprising a **neural network** or plurality thereof trained for **diagnosing endometriosis**." is anticipated by Hutcheson, et al, column 28, lines 61-67 and column 29, lines 1-16, where it recites:

> Any time varying analog signal input compatible with well known analog to digital conversion boards compatible with computers can be processed as described herein. Representative signals might include seismic traces, radar signals, voice, **medical diagnostic signals** such as EKG, EEG etc., **and any other sensor signal. Any signal** which has a periodicity or is bounded and limited in its content and which can be digitized so as to be stored in computer memory **may be presented to the system** with Input Feature Vectors generated by the mechanisms previously described, and operated on using the training and recognition techniques set forth herein. Since the system uses **supervised learning techniques**, the choice of system desired outputs can range from the identity of the object, to "good/bad" or "pass/fail" answers, independent of the type of input. The Feature Template mechanism guarantees maximal separability between objects in the same class, the Feature

> Vector extraction mechanism the optimal Input Feature Vector, and the recognition mechanism the closest fit to the desired result, with application dependent analysis of the resulting confidence levels. Thus, for the different applications cited, no system reprogramming is required for different applications.

Claim 2

Claim 2's "querying and examining the patient to assess the answers to at least three of the following questions: past history of endometriosis, number of births, dysmenorrhea, age, pelvic pain, history of pelvic surgery, smoking and if yes, the number of packs/day, medication history, number of pregnancies, number of abortions, abnormal PAP smear/dysplasia, pregnancy hyperplasia, genital warts and diabetes; and" is anticipated by Hutcheson, et al, column 28, lines 61-67 and column 29, lines 1-16, where it recites:

> Any time varying analog signal input compatible with well known analog to digital conversion boards compatible with computers can be processed as described herein. Representative signals might include seismic traces, radar signals, voice, **medical diagnostic signals** such as EKG, EEG etc., **and any other sensor signal**. Any signal which has a periodicity or is bounded and limited in its content and which can be digitized so as to be stored in computer memory may be presented to the system with Input Feature Vectors generated by the mechanisms previously described, and operated on using the training and **recognition** techniques set forth herein. Since the system uses supervised learning techniques, the choice of system desired outputs can range from the identity of the object, to "good/bad" or "pass/fail" answers, independent of the type of input. The Feature Template mechanism guarantees maximal separability between objects in the same class, the Feature Vector extraction mechanism the optimal Input Feature Vector, and the recognition mechanism the closest fit to the desired result, with application dependent analysis of the resulting confidence levels. Thus, for the different applications cited, no system reprogramming is required for different applications.

Claim 2's "based upon the results of the answers determining whether the patient has endometriosis." is anticipated by Hutcheson, et al, column 28, lines 61-67 and column 29, lines 1-16, where it recites:

> Any time varying analog signal input compatible with well known analog to digital conversion boards compatible with computers can be processed as described herein. Representative signals might include seismic traces, radar signals, voice, **medical diagnostic signals** such as EKG, EEG etc., **and any other sensor signal**. Any signal which has a periodicity or is bounded and limited in its content and which can be digitized so as to be stored in computer memory may be presented to the system with Input Feature Vectors generated by the mechanisms previously described, and operated on using the training and **recognition** techniques set forth herein. Since the system uses supervised learning techniques, the choice of system desired outputs can range from the identity of the object, to "good/bad" or "pass/fail" answers, independent of the type of input. The Feature Template mechanism guarantees maximal separability between objects in the same class, the Feature Vector extraction mechanism the optimal Input Feature Vector, and the recognition mechanism the closest fit to the desired result, with application dependent analysis of the resulting confidence levels. Thus, for the different applications cited, no system reprogramming is required for different applications.

Claim 3

Claim 3's "A computer system, comprising a neural network or plurality thereof trained for assessing the risk of delivery within a selected time period, wherein the time period is within seven or fourteen days of performing a biochemical test to measure fetal fibronectin in a sample from a pregnant subject or the time period is prior to thirty five weeks of gestation." is anticipated by Hutcheson, et al, column 28, lines 61-67 and column 29, lines 1-16, where it recites:

> Any time varying analog signal input compatible with well known analog to digital conversion boards compatible with computers can be processed as described herein. Representative signals might include

> seismic traces, radar signals, voice, **medical diagnostic signals** such as EKG, EEG etc., **and any other sensor signal**. Any signal which has a periodicity or is bounded and limited in its content and which can be digitized so as to be stored in computer memory may be presented to the system with Input Feature Vectors generated by the mechanisms previously described, and operated on using the **training** and recognition techniques set forth herein. Since the system uses supervised learning techniques, the choice of system desired outputs can range from the identity of the object, to "good/bad" or "pass/fail" answers, independent of the type of input. The Feature Template mechanism guarantees maximal separability between objects in the same class, the Feature Vector extraction mechanism the optimal Input Feature Vector, and the recognition mechanism the closest fit to the desired result, with application dependent analysis of the resulting confidence levels. Thus, for the different applications cited, no system reprogramming is required for different applications.

Claim 4

Claim 4's "The system of claim 3, wherein the time period is within seven days of performing a biochemical test to measure fetal fibronectin." is anticipated by Hutcheson, et al, column 28, lines 61-67 and column 29, lines 1-16, where it recites:

> Any time varying analog signal input compatible with well known analog to digital conversion boards compatible with computers can be processed as described herein. Representative signals might include seismic traces, radar signals, voice, **medical diagnostic signals** such as EKG, EEG etc., **and any other sensor signal**. Any signal which has a periodicity or is bounded and limited in its content and which can be digitized so as to be stored in computer memory may be presented to the system with Input Feature Vectors generated by the mechanisms previously described, and operated on using the **training** and recognition techniques set forth herein. Since the system uses supervised learning techniques, the choice of system desired outputs can range from the identity of the object, to "good/bad" or "pass/fail" answers, independent of the type of input. The Feature Template mechanism guarantees maximal separability between objects in the same class, the Feature Vector extraction mechanism the optimal Input Feature Vector, and the recognition mechanism the closest fit to the desired result, with application dependent analysis of the resulting confidence levels. Thus, for the different applications cited, no system reprogramming is required for different applications.

Claim 5

Claim 5's "The system of claim 3, wherein the time period is within or fourteen days of performing a biochemical test to measure fetal fibronectin." is anticipated by Hutcheson, et al, column 28, lines 61-67 and column 29, lines 1-16, where it recites:

> Any time varying analog signal input compatible with well known analog to digital conversion boards compatible with computers can be processed as described herein. Representative signals might include seismic traces, radar signals, voice, **medical diagnostic signals** such as EKG, EEG etc., **and any other sensor signal**. Any signal which has a periodicity or is bounded and limited in its content and which can be digitized so as to be stored in computer memory may be presented to the system with Input Feature Vectors generated by the mechanisms previously described, and operated on using the **training** and recognition techniques set forth herein. Since the system uses supervised learning techniques, the choice of system desired outputs can range from the identity of the object, to "good/bad" or "pass/fail" answers, independent of the type of input. The Feature Template mechanism guarantees maximal separability between objects in the same class, the Feature Vector extraction mechanism the optimal Input Feature Vector, and the recognition mechanism the closest fit to the desired result, with application dependent analysis of the resulting confidence levels. Thus, for the different applications cited, no system reprogramming is required for different applications.

Claim 6

Claim 6's "The system of claim 3, wherein the time period is prior to thirty five weeks of gestation." is anticipated by Hutcheson, et al, column 28, lines 61-67 and column 29, lines 1-16, where it recites:

> Any time varying analog signal input compatible with well known analog to digital conversion boards compatible with computers can be processed as described herein. Representative signals might include seismic traces, radar signals, voice, **medical diagnostic signals** such as EKG, EEG etc., **and any other sensor signal**. Any signal which has a periodicity or is bounded and limited in its content and which can be digitized so as to be stored in computer memory may be presented to the system with Input Feature Vectors generated by the mechanisms previously described, and operated on using the **training** and recognition techniques set forth herein. Since the system uses supervised learning

techniques, the choice of system desired outputs can range from the identity of the object, to "good/bad" or "pass/fail" answers, independent of the type of input. The Feature Template mechanism guarantees maximal separability between objects in the same class, the Feature Vector extraction mechanism the optimal Input Feature Vector, and the recognition mechanism the closest fit to the desired result, with application dependent analysis of the resulting confidence levels. Thus, for the different applications cited, no system reprogramming is required for different applications.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

A. Hsiung et al. (U.S. Patent Number 6,853,920 B2; dated 08 FEB 2005; class 702; subclass 001) discloses a control for an industrial process using one or more multidimensional variables.

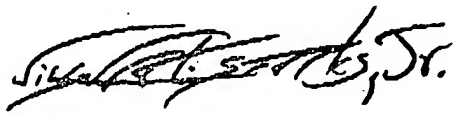
B. Tang et al. (U.S. Patent Number 6,658,396 B1; dated 02 DEC 2003; class 706; subclass 017) discloses neural network drug dosage estimation.

C. Lapointe et al. (U.S. Patent Number 6,556,977 B1; dated 29 APR 2003; class 706; subclass 015) discloses methods for selecting, developing and improving diagnostic tests for pregnancy-related conditions.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Wilbert L. Starks, Jr. whose telephone number is (571) 272-3691.

Alternatively, inquiries may be directed to the following:

S. P. E. David Vincent	**(571) 272-3080**
Official (FAX)	**(571) 273-8300**



Wilbert L. Starks, Jr.
Primary Examiner
Art Unit 2129

WLS

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